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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,369	07/15/2003	Alexander B. Faytlin		1368
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36014	7590	05/25/2005
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EXAMINER

POLYZOS, FAYE S

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,369

Applicant(s)

FAYTLIN ET AL.

Examiner

Faye Polyzos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-22 is/are allowed.
- 6) ☒ Claim(s) 1-3, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 4-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by *Starkey et al* (US 3,751,166).

Regarding claim 1, *Starkey* discloses of a thermal control system for a light source comprising: a cooling assembly (12) having a cooling device and being thermally coupled to the light source (10); a thermal sensor thermally coupled to the light source and generating a light source temperature signal; and a control circuit coupled to the cooling assembly and the thermal sensor, the control circuit operating the cooling device (See Generally Fig. 1 and col. 2, lines 8-28, 46-54, 62-67 and col. 3, lines 33-18).

Claim Rejections - 35 USC § 103

3. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over *Starkey et al* (US 3,751,166) as applied to claim 1 above, and further in view of *Zhan et al* (US 2004/0170017 A1).

Regarding claim 2-3, *Starkey* discloses of a cooling assembly to allow the laser diode to operate at high average powers and enhance the output wavelength of the diode array (col. 3, lines 3-6). *Starkey* does not disclose the cooling assembly

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comprising a cooling fan as a cooling method. *Zhan* discloses the cooling assembly comprising a cooling fan (32) in thermal communication with the light source (21), the control circuit operating the cooling fan (32) to circulate air across the heat sinks when the light source temperature signal is above the minimum temperature limit. *Zhan* teaches illuminators may comprise a fan located to cause a flow of air through apertures in the substrate and in some cases the fan is operated to drive air out of the housing through an exhaust vent in the rear portion and to draw air from the front portion to the rear portion through the apertures ([0009] and [0028]-[0031]). Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system suggested by *Starkey* to comprise a cooling fan as a method of cooling the light source suggested by *Zhan* to allow for a more versatile apparatus.

Regarding claims 15-16, *Starkey* discloses wherein the control circuit comprises a drive circuit to activate the cooling device when temperature of the light source is greater than the predetermined temperature limit (col. 3, lines 3-12).

Allowable Subject Matter

4. Claims 4-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 17-22 are allowed.

6. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 17 and 19, the prior art does not disclose or fairly suggest of system or method of a vision system for a vehicle comprising a thermal

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control system to cool a light source in response to a temperature signal from the apparatus.

The examiner notes that while it is known in the art for a night vision system to comprise of a cooling system to allow the light source of the apparatus to operate at high average power and enhance the output wavelength of the diode array (see for example *Starkey et al* – US 3,751,166 – col. 3, lines 3-6), the prior art does not fairly suggest of a thermal control system for a vehicle apparatus comprising of a cooling device as disclosed supra when a temperature signal reaches a minimum temperature limit.

The remaining claims 18 and 20-22 are allowed based on their dependency.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Polyzos whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FP



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